



Attorney Docket: 225/49834  
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Dr. Christof Eberspächer et al.

Serial No.: 09/824,570

Group Art Unit: 1775

Filed: April 3, 2001

Examiner: J. Savage

Title: SYNCHRONIZER RING

REPLY

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Reply is filed in response to the Office Action dated July 29, 2004. Claims 1, 2, 4, 16, and 56-59 remain in this application. Claims 3, 5-15, and 17-55 are canceled. Reconsideration of the application is requested.

Independent claim 1 is rejected, along with dependent claims 2, 4, 16, and 56-59, as being unpatentable over U.S. Patent 5,249,661 to Kawamura et al. Reconsideration of this rejection is again requested.

As noted previously, the Kawamura et al. ('661) patent does not disclose a synchronizer ring comprising a tribological coating which is permitted to be over 30% and up to 40% by weight of a solid lubricant as claim 1 requires. Again, the film 3 of the Kawamura et al. ('661) synchronizer ring has ceramic particles of 5 to 30% by weight disposed in molybdenum or a molybdenum alloy. Lines 30-35 in

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column 4 of the Kawamura et al. ('661) patent explicitly set forth that when the ceramic particles are present in an amount over 30 weight %, abrasion of the object member may overexceed. Evaluating all of the disclosures in the Kawamura et al. ('661) patent for what they fairly teach one of ordinary skill in the art necessarily leads to a conclusion that a synchronizer ring comprising a tribological coating which is permitted to be up to 40% by weight of a solid lubricant would provide abrasion which may overexceed. In view of the discussion provided by lines 30-35 in column 4, modifying the Kawamura et al. ('661) film 3 so that it is permitted to be over 30% and up to 40% by weight of a solid lubricant as claim 1 requires certainly is not made obvious by the Kawamura et al. ('661) patent disclosure itself. Such a modification is also not suggested by anything else properly relied on by the Examiner, and the Examiner has provided no convincing rationale for asserting that it would have been obvious "to have permitted the solid lubricant content to be above 30 wt% ... as taught by Kawamura."

The Examiner's comments on particle size provided on page 4 of the Office Action are also noted. The discussion set forth from line 60 in column 5 to line 2 in column 6 of the Kawamura et al. ('661) patent describes formation of a flame-coated film by effecting a coating treatment with material powders consisting of 150 mesh structure molybdenum alloy to which 250 mesh ceramic particles were added. Nothing in this or any other portion of the Kawamura et al. ('661) patent, however, suggests provision of a solid lubricant having a particle size of no more than approximately 180 $\mu$ m as particularly recited in claim 1.

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Reconsideration and withdrawal of the rejection of claim 1 based on the Kawamura et al. ('661) patent are in order and are requested for reasons discussed above.

It is respectfully submitted that claim 1 is patentable in its present form for reasons discussed above. The rest of the claims in this application depend on claim 1 and are patentable as well.

This application is now in condition for allowance. Should the Examiner have any questions after considering this Reply, the Examiner is invited to telephone the undersigned attorney.

Respectfully submitted,

Date: November 29, 2004

  
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